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1911

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U. S. Department of Agriculture,
Washington, D. C.

STRAWBERRY PLANTS

— AND —

OTHER SMALL FRUITS

— ALSO —

GLADIOLUS BULBS



M. CRAWFORD COMPANY

CUYAHOGA FALLS, OHIO



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Certificate of Nursery Inspection
No. 414. Columbus, Ohio,
Sept. 12, 1910.

This is to certify that in accordance with the provisions of the Nursery and Orchard Inspection Law of the State of Ohio, the nursery stock for sale by M. Crawford Co. of Cuyahoga Falls, County of Summit, State of Ohio, has been inspected by a duly authorized Inspector, and has been found apparently free from dangerously injurious insects and plant diseases.

Invalid after Sept. 15, 1911.

N. E. SHAW, Chief Inspector.

Strawberry Culture. By M. Crawford. This little book of 64 pages was sent out nine years ago by our firm at a nominal price for the benefit of our customers. When the most of them had been supplied we sold the copyright to W. F. Allen. We have lately purchased of him a fresh stock, and can now furnish the book to all who may desire. It is a very complete work, covering the subject in a thorough manner. It treats of kinds of soil, preparation, fertilizers, selection of varieties, systems of culture, planting, care, mulching, spring treatment, picking and marketing, fall planting, insect enemies, diseases, and various other subjects along the same line. When it first came out American Gardening pronounced it "A capital compendium of up-to-date practice." One of the early purchasers wrote: "Five dollars would not buy that book of me if I could not get another." "I have often paid more than \$1.00 for a book not worth one-quarter as much," came from another pleased reader. Paper, 25 cents.

1911



GAIN we greet our numerous family of customers with the wish that this may be a prosperous and happy year to each and every one. We return thanks to all for the uniform kindness and courtesy which have been shown us, and for the generous appreciation which has met our efforts to please. Our business has been extended, and our circle of patrons increased by the good words you have spoken of us, and again we thank you. This little book will fall into the hands of many who have not known us before, and we hope that it may be the means of leading to business relations which shall be pleasant and profitable to both you and us. If we may serve you once, as a sample of our mode of dealing, we believe that you will come to us again and again when you are in want of things in our line.

Our plants are well grown and stocky. The beds were set last spring and received the best of care. They had scarcely begun to send out runners when the rains, which had been too frequent in the spring, ceased, and from the middle of June until fall we had only occasional showers, but by constant cultivation we kept our plantation flourishing, and have now a fine stand of good, strong plants.

Our methods are much the same from year to year, and those who are familiar with them know just about what to expect, but for those who are not acquainted with our ways we pass our statements along from one catalog to another.

We acknowledge all orders as soon as possible after they are received, and if you do not hear from us promptly it is a pretty sure indication that either your letter or our card has gone astray, and it would be well to write again.

Our plants are trimmed by hand, tied in bunches of twenty-five each, good count, and correctly labeled. We warrant them to reach our customers in good condition, and should they be lost or ruined in transit we replace them or return the price. We seldom make mistakes, but when they do occur we cheerfully correct them. Complaint should be made as soon as possible. We stipulate in this connection that in case of loss we shall not be liable for a sum greater than the original cost of the plants. Our warrant does not extend to Canada, the rules of the Dominion in regard to the admission of nursery stock being such as to render it liable to delays which may involve loss.

Our packing is first-class, including plenty of moss for security, and yet made as light as possible to keep down transportation charges. We receive many commendations on its excellence. We ship by mail and express with equal success. The express companies make a special rate on nursery stock, which is 20 per cent. lower than that on merchandise, but the minimum charge is 35 cents. For this reason it is better to have small orders sent by mail, as the postage is only eight cents a pound. Our express companies are Adams and United States.

We begin shipping about the first of April, sometimes earlier, very seldom later, and push the work as fast as possible, shipping our southern and Pacific coast orders before our northern customers are ready. It is our aim to send out every order just when it is wanted, and it is a great help to us along this line to have the time of shipment named in the order. In many instances this cannot be done, and when such is the case it is a good plan to say "Ship when notified," and then write at the proper time. A certificate of inspection is attached to each package of plants, and a card of notification is mailed for every shipment by express.

Our terms are cash with order or before shipment. We make exceptions to this rule in dealing with Experiment Stations and other public institutions. Remittances

may be sent by post office or express money order, bank paper, or registered letter, or small sums in stamps.

Our descriptions of varieties are accurate according to our judgment. We do not intend to over-praise nor to conceal faults, nor on the other hand to criticise unduly, but endeavor to state impartially the merits and defects of the different varieties as we see them. If we seem to give much praise and little criticism, to "make them all good," as one has said, it is because they are good. We have selected a few that we consider of real value among the hundreds of varieties that we have grown, and they deserve all that we say of them. There are others of merit, but to catalog them all would make our list too long, and so we have chosen those which seem best adapted to our general trade. We aim to keep up with the times and the wants of our patrons by adding to our collection each year the recent introductions, some of which make their way to general favor, and in time take rank among the standard sorts. Others, not so generally successful, become only locally popular, while very many disappear entirely. We always advise our customers to try these new candidates in a small way before venturing to plant them extensively, for although they may be wonders at home they may fail elsewhere. This can be determined only by testing.

We cannot commend too highly the wisdom of ordering early. Late in the fall we make an estimate of the number of plants of each variety in our field, and as orders come in we keep an account of the numbers sold. When the sales of any variety equal the estimate we mark it "sold out," and stop taking orders for it. It sometimes happens that a variety is in such demand that it is sold out before we dig a plant. Thus it is easy to see that those who order early have the advantage.

Another thing to talk about is substitution. Early in the season when the stock is full there is no occasion to mention it, but later, as one kind after another becomes exhausted, we like to know whether or not we may send something else if the variety wanted is sold out. If those who order after the first of April would give us permission to substitute, or name a second choice for each kind wanted, it would be a great help to us and prevent the delay caused by correspondence. We reserve the right to substitute according to our best judgment after the middle of April, unless forbidden to do so. This plan is gaining in favor, and more of our customers are adopting it each year.

We have been trying for many years to diminish the number of varieties of strawberries on our list, but, as we said last spring, "the old ones have so many merits, and the new ones are so promising" that we have not made much of a success of it. A year ago, however, when planting time came, we determined to make a reduction that should count. Accordingly we dropped every variety that we could possibly spare, some because they were not in great demand, some because they closely resembled others, some because they showed no marked superiority in any line, and so on. In this way we cut off more than one-third of our list. To the part remaining we have added a few that we did not catalog last year, and on the whole we feel quite well satisfied with the result.

STRAWBERRY CULTURE

Beginners in this business seem so eager to learn, and so grateful for help, that in deference to their needs we devote a small space to the above subject. The most of this matter is taken from former catalogs.

PREPARATION OF THE SOIL, AND FERTILIZERS.

The ground should be thoroughly pulverized by plowing and harrowing. A small bed may be prepared by spading and raking. The soil should be made rich, and this

may be accomplished by the use of barnyard or commercial fertilizer, according to convenience. The former, if fresh, should be spread over the ground in the winter and allowed to leach. If it contains much litter this should be raked off before plowing. Old and well decomposed manure should be applied after plowing and before harrowing, so that it may be well worked into the soil, and still remain near the surface. Commercial fertilizer may be used by strewing it around the plants after they become well established, say two or three weeks after setting. It must not be allowed to touch the foliage. A moderate handful to each plant is sufficient.

TIME TO PLANT.

Spring is the best time to plant strawberries, and the earlier the better. Before growth commences the plants are ripe and tough, and it does them very little harm to be transplanted, but after they have put out young, tender leaves and roots the change affects them more seriously, especially if the weather comes hot and dry soon after.

PLANTING.

When ready to set the plants, if they have not already been trimmed, take off all the old leaves and runners, and shorten the roots to three inches. Place them in a pail containing about two inches of water, and take them out one by one as wanted. Do not allow the roots to be exposed to the air. Set them as deep as they grew before, and no deeper. In other words, take special care not to cover the crowns. The roots should be spread out in fan shape, and the earth pressed firmly about them. In due time blossoms will appear, and these should be promptly cut off. Others may come later, and these too should be removed.

HEELING IN.

It sometimes happens that plants ordered from a distance arrive at a time when it is not convenient to set them at once. Prepare a bed three or four feet wide and set the plants in rows across it, placing them an inch or two apart in the row, and making the rows four or five inches apart. Shorten the roots of the plants to three inches, and put them in water before setting. Begin at one end of the bed and work backwards. You will tramp on the prepared bed behind you as you work, but the soil can be easily loosened up again. When done scatter a little straw over the bed and the plants will be safe for a month,—until they have made a good growth of white roots. When wanted for planting they should be well watered the night before. They can then be carried to the field with some soil adhering. If they bloom in the temporary bed the blossoms should be nipped off.

CULTIVATION.

From the time the plants are set until fall the ground should be stirred often, to conserve the moisture and destroy the weeds. If deep cultivation is practiced it should cease early in the fall, as at that time the plants send out new roots near the surface, which should not be disturbed. The weeds that appear after cultivation is discontinued will be killed by frost a little later on.

WINTER PROTECTION.

In the northern states strawberries need some protection in the winter by a light covering, say two or three inches, of straw, leaves, or any litter that will shade the ground and hold the snow. This should be put on late in the fall, and removed from over the plants about the time they start into growth in the spring. It may be left between them and in the paths, as a mulch. The main want of the strawberry at fruiting time is water, and this is an excellent mode of keeping the ground moist. It also keeps the fruit clean.

METHODS OF CULTURE.

There are three popular methods of growing strawberries,—the matted row, the hedge row and hill culture. By the first the runners are allowed to grow without restriction; by the second each plant is permitted to set a limited number of new ones, and beyond these the runners are kept cut; by the third the runners are cut from the beginning, and never allowed to grow more than a few inches in length. The first costs the least work, and as a rule yields the most quarts of berries to a given space, but they are not the largest. The second involves more labor and produces larger fruit, but not quite as much to the acre. The third requires the most attention and gives the finest berries in return.

DISTANCES IN PLANTING.

Distances in planting vary according to the method of cultivation adopted, and the nature of the varieties used. As a general rule the rows may be three and one-half feet apart. For the matted row, ordinary kinds may be set two feet apart, or a little more, in the row, and fast runners like Sen. Dunlap, four. If the plants are to be grown in hedge rows or by hill culture, a foot and a half is about right.

NUMBER OF PLANTS TO THE ACRE.

The number of plants required for an acre, set at any given distances, may be easily computed. One acre contains 43,560 square feet, and this number divided by the number of square feet occupied by one plant will give the number of plants to the acre. For instance: if the plants are to be set three and one-half by two feet, multiply these numbers together and the product is seven, the number of square feet required for each plant. Seven is contained in forty-three six times with a small remainder, hence, a few more than 6,000 plants will be needed.

SIZE OF PLANTS.

Some varieties make very large plants, others medium, and still others small. Comparing Uncle Jim and Warfield, the plants of the latter might seem to an inexperienced buyer so small as to be worthless, but they are small by nature, not culls. They are tough and hardy, and will make many runners and bear large crops.

PERFECT AND IMPERFECT BLOSSOMS.

Strawberry plants are divided into two general classes called perfect and imperfect, or staminate and pistillate. The perfect or staminate varieties have stamens, produce pollen, and fertilize not only their own blooms but those of the other class. The imperfect or pistillate sorts, as a rule, have no stamens and produce no pollen, hence their blooms must be fertilized by staminate. However, as a matter of fact, many of the so-called imperfect varieties have a few stamens and are able to pollenate themselves to some extent, but not sufficiently to produce a full crop. In planting imperfect or pistillate kinds every third, fourth, or fifth row should be set with some perfect or staminate variety. In our catalog we mark the perfect sorts P, and the imperfect I.

STRAWBERRIES ON THE FARM.

For farmers who have neither time nor inclination to do what seems to them like "puttering," there is an easy way to have an abundant supply of strawberries for family use. This can be done by leaving a few square rods in some corn or potato field, and setting this space to strawberry plants in rows continuous with those of the farm crop. In this way all will be cultivated and hoed together, and the straw-

berry corner is likely to prove the most satisfactory portion of the field,—perhaps the most profitable as well. True, there will be a break in the field the next year which will be somewhat inconvenient, but it will pay to work around it.

WHAT TO PLANT.

This is an important question, especially to beginners, and sometimes a very puzzling one. To such we would say that if you are setting a bed for home use you will make no mistake in planting Senator Dunlap or Wm. Belt, with Latest to lengthen the season. If you intend to grow berries for sale, make yourself familiar with the demands of your market. Will it require fine fruit at good prices, or an ordinary grade that can be sold cheaper? Are the darker or lighter berries in favor? Is your market distant or near? If the former you need good shippers, if the latter you can use the more delicate varieties. When you have decided as to requirements, choose a few kinds that by their descriptions seem suitable, and begin by planting a small area. This will give you an opportunity to observe those varieties and see which succeed best with you. There is room in nearly every country community for at least one grower to sell a large crop of berries at his own place. Let him plant varieties that are handsome in appearance and rich in flavor, and give notice that he will sell at a certain moderate price throughout the season. Purchasers will come from all directions, and count themselves fortunate in being able to obtain fresh berries whenever they want them. A grower in Portage County, Ohio, who adopted this plan told us several years ago that he had counted thirty conveyances about his place at one time, all after strawberries. The supply creates the demand.

ROCKHILL'S EVERBEARING STRAWBERRIES.

We have now fruited these berries three years, and made mention of them in two of our catalogs. Many of our customers have shown a lively interest in them, and an eager desire to obtain plants. We are pleased to state that this wish can now be gratified.

Everbearing strawberries have been known for fifty years or more,—first the red and white Alpines, then the Mexican, all small and flavorless; next the Louis Gauthier and St. Joseph from France, which required special attention,—mulching, shading and watering; then a variety from the mountains of Mexico, sent out by the Department of Agriculture, but its foliage was almost ruined by rust. About ten years ago came the Pan-American, which bears all right, but makes so few runners that the plants are still a dollar a dozen, and more in some catalogs. It remained for Mr. Harlow Rockhill of Conrad, Iowa, to originate, after twelve years of careful work, a strain of everbearing strawberries of practical value, profitable for both plants and fruit. They require no extra care above that given the June-bearing sorts, and the latter yield berries from two to four weeks in the summer, while these bear continuously for five months, and at the same time send out a good crop of runners which also produce blossoms and fruit. We have had ripe berries from runners not yet rooted. For the past two years we have sold the fruit in Akron, our nearest city, at forty cents a quart, wholesale.

Our acquaintance with this rare fruit began in the spring of 1908, when Mr. Rockhill sent us three varieties for testing. They were allowed to produce all the runners and bear all the fruit they would, except that the first bloom was cut off from the most of the plants. They made a matted row of plants over three feet wide, and ripened their beautiful berries through the late summer and fall until stopped by a freeze in November. In the fall of 1908 Mr. Rockhill visited our place, and arranged with us to grow plants for him the next year and ship them to his customers in the spring of 1910. He sent us ten varieties, and we kept the blossoms cut until the first

of August. After that we let them go, and in a few weeks they began to ripen fruit. They yielded a continuous crop until late in November, and were full of berries and blossoms when frozen at that time.

In the spring of 1910 Mr. Rockhill named two of his berries Francis and Americus and sold the plants to a few nurserymen who signed a contract to sell at a uniform price of \$2.50 per dozen, after August first. We bought five hundred, and sold so many young plants in the fall in response to special requests that we have no Francis to spare this spring. We regret this deficiency, but have two other varieties which we offer to the public with perfect confidence based upon a thorough knowledge of their good qualities, believing that both will be splendid money makers.

Americus. P.—This is a very thrifty grower and makes plants rapidly. It is also a good yielder, though not quite as prolific as Francis, but on the other hand, it is a better runner. The fruit is of medium size, roundish conical in shape, fine red in color, and deliciously sweet and rich in quality. It is firm in texture and bears handling well.

Iowa. P.—We are glad to announce that we have secured the control of the entire stock of this fine berry, which was recently named in honor of its native state. The plant is strong, vigorous and productive, with never a spot of rust, which last can be truly said of all Mr. Rockhill's varieties. The Iowa is the largest berry in his collection, short-conical, and quite uniform in size and shape. It is moderately firm, and about a fair average in quality, but not equal to Francis or Americus.

The following is Mr. Rockhill's account of the Iowa: "Plant large and thrifty, always healthy here, a satisfactory plant-maker under average weather conditions. A little later than some others in coming into bloom, thus saving the labor of disbudding. A heavy and continuous fruiter here from about August tenth to cold weather; fruit medium to large, color scarlet, firm, quality good, but not the highest. In June 1908 plants were allowed to fruit in hills and matted rows. It proved the heaviest fruiter of any variety ever tested on this place, and most of the varieties introduced during the past twenty years have been tested here. Fruit was just piled up in the matted row and around the hills. The berries were about the size of average Brandywines, and a shade darker in color."

It has never been our way to urge our customers to buy new, high-priced novelties, nor do we now, but we have so much faith in these everbearing strawberries, and so fully expect them to become both popular and profitable, that we suggest the wisdom of securing a few plants now and growing a good stock for future use.

DESCRIPTIONS.

A correspondent offers a suggestion in regard to describing the flavor of strawberries which we think good, and shall adopt to some extent. He says, "Almost all are 'excellent,' 'fine,' 'sweet,' 'delicious,' 'faultless,' 'extraordinary,' 'sprightly,' 'superb'—why are you not the one to change this order? Take some berry like Marshall, Wm. Belt or Brandywine as a sample to compare the quality of others with, and your customers will be able to judge something about the matter." In our opinion the Wm. Belt is the best of all the June-bearing varieties, and we will make it our standard of comparison when occasion requires. There are seven new varieties in the following list,—Amanda, Barrymore, Lea, Manhattan, Meteor, Ohio Boy and Twilley.

Amanda. P.—Medium to late. New. A native of Ohio, seedling of Sample and Maximus, grown by Z. T. Mumma and introduced by J. Whitt in 1910, when it sold at \$5.00 per dozen. A great plant maker. The introducer grew over 800 from 13. The plants are of large size, healthy, and have long roots, a great advantage in

a dry time. They are described as heavy yielders of very large, handsome berries which are red to the center. The New York Experiment Station Report says in 1908: "Fruit of large size which holds well throughout the season, wedge to roundish conic, light and dark scarlet, slightly glossy. Flesh well colored, very firm, agreeably acid, pleasant flavor, quality good." In 1909 the Director wrote again as follows: "A short time ago this Station tested a few plants of the Amanda strawberry. They made such a good record that we wish to test this variety on a larger scale. Please forward 100 plants, mailing two copies of bill."

Barrymore. P.—Early. New. This berry was originated by H. L. Crane of Westwood, Mass., and first brought into prominence at the Boston Horticultural Show in 1908, where it took first premium for the best new seedling not yet introduced, the best four quarts of any named variety, the best five baskets, two quarts each, and the best two quarts. The originator says that it beat the Marshall, which had not been done for several years in Boston. He adds: "The berry held its own till the close of the show. It did not turn dark and dull looking, as many dark berries do, and was practically in a class by itself." In regard to its productiveness he says: "In 1907 I got at the rate of 9000 quarts to the acre from a very thick matted row, and about the same number from a thinned row eight to ten inches apart. In 1908 we grew more of them but lost the record of one picking;—would place the yield at about 8000 quarts." Mr. Crane also says: "The Barrymore is an excellent plant maker, but the runners are rather too long between plants. The berry is very regular, conical in shape, dark crimson and glossy. Flesh is red. It brings a fancy price in the Boston market, where dark berries are in demand. We received eighteen to twenty cents when Glen Marys brought us twelve and one-half the same day. It is in season with the Glen Mary, medium with us."

Mr. S. H. Warren of Auburndale, Mass., wrote us in December, 1908: "We had a great surprise in our Massachusetts Horticultural Show in Boston last June in a new seedling called the Barrymore. It won first prize in every class in which it was exhibited. It is large and handsome. Its most prominent feature is its glossy appearance. The berries shine as if varnished, and the originator says they hold this gloss a long time after being picked. The only point I disagree with him on is its quality. He calls it excellent. It is not so to my taste, but you ought to have it. It is one of the coming strawberries."

Bubach. I.—Early medium. Originated by J. G. Bubach of Princeton, Ill., about thirty years ago. It took front rank as a market berry at once, and has held its own ever since, although not a good shipper and only ordinary in flavor. Its great, vigorous plants, wonderful productiveness and immense berries are the merits by which it retains its high position.

Chesapeake. P.—Late. Originated by J. W. Parks of Maryland. In 1903 it won W. F. Allen's one hundred dollar prize in competition with more than a hundred other varieties. It makes strong, healthy plants, and will probably supersede Gandy with many growers, as it is much more productive, and fully equal in other respects.

Commonwealth. P.—Very late. A native of Massachusetts, produced by W. H. Monroe. This is a good grower, healthy, and a moderate plant maker. The fruit is very large, but often irregular in shape and the first berries that ripen show green tips, but in spite of these faults it is a very popular sort. Its color throughout is the richest, darkest red, and the surface has a fine gloss. In flavor it is rich and hearty, somewhat like the Marshall. It is an excellent shipper and a first-class keeper. We lost the most of our plants by grubs in 1909, but saved a few, and now offer it again.

Early Ozark. P.—Early. A cross between Aroma and Excelsior, from Charles Shull of Missouri. Two years ago when this was new we had more orders than we could fill, and foreseeing a heavy demand the next year we endeavored to grow an adequate stock. When we began filling orders last spring we found that many of the plants had black roots and were worthless, so our supply ran short again. We can not account for this condition, but hope that it will not appear again this year. The Early Ozark makes large plants with fine foliage, and is said to be very productive. We have not had it in bearing enough to judge on this point. The fruit is large, good, and firm. The originator says that it is "the largest extremely early berry ever introduced."

Ekey. P.—Early medium, and makes a short season. From E. H. Ekey, of southeastern Ohio. One of the most popular of the newer introductions. It makes large plants but not many of them. It is a good yielder of very beautiful fruit, large, long, glossy, and dark red to the center. It has a pleasant flavor but is not nearly as sweet as Wm. Belt. Its short season is an advantage to those who grow several varieties, for it yields its crop of fine fruit and stops short. There is no dwindling out to small berries that are not worth picking.

Fendall. I.—Early. A Maryland berry, produced by Chas. E. Fendall from seed of the Wm. Belt, which it resembles in appearance and flavor. It is a wonderful grower, and makes many plants, with large foliage and long roots. The fruit is immensely large, the specimen from which Mr. Fendall's cut was made being nearly three inches across. In color and flavor it is all that could be desired, like its progenitor. It is reasonably firm. As to yield it is remarkably prolific, having borne on a small plantation at the rate of more than 500 bushels per acre. Half that amount would be profitable in field culture. Its season of ripening is very long, covering a period of forty days. On this account, as well as for its fine flavor, it is excellent for home gardens, no other variety being required to lengthen the season.

First Quality. P.—Late. From J. D. Gowing of eastern Mass. Much effort has been expended within the last few years in originating late strawberries, and this seems to be one of the successes. It is a seedling of Sample, and said to be fully as vigorous and prolific as that well known variety. We find it one of the best growers on our place. The fruit is large and dark red. Its name speaks for its flavor. It should be as good as Wm. Belt, but we have not compared the two.

Fremont Williams. P.—Late. A seedling of Gandy and Bush Cluster, produced by Louis Hubach of Ark. It is a thrifty grower with healthy foliage and multiplies rapidly. It is the equal of Gandy in size, beauty, flavor, and firmness, and much more productive.

Gill. P.—Very early. From southeastern Ohio, named for J. J. Gill, and we think originated by him. Vigorous in growth and very productive. The fruit is medium in size and short-conical in shape. The flesh is light, and only moderately firm, but the surface is not easily broken, hence it bears handling quite well. It colors all over, and when thoroughly ripened is pretty good, though it can never compare with Wm. Belt. As a mid-season berry this would not rank high, but for those who want an extra early it is valuable and also profitable.

Glen Mary. P.—Early. Originated in eastern Pennsylvania and introduced about twelve years ago. It is vigorous in growth, making large plants which are exceedingly productive. On this account, together with the great size, brilliant color, good flavor and firm texture of the fruit, it has made its way to popularity, notwithstanding the fact that it is irregular in form and rough in appearance. In 1899 Mr. Haywood of Philadelphia grew a four-ounce berry of this variety.

Golden Gate. P.—Early medium and makes a long season. Originated by S. H. Warren of Mass., and introduced about five years ago. It took a high place in public favor from the first, and now ranks among the popular varieties. It is a luxuriant grower, making large plants with ample foliage. The fruit is of fine oval form, very large and beautiful, and attracts attention wherever seen. It is shining red in color, and this extends half way to the center, which is white, making the berry very tempting when cut in pieces, as it must be for eating. In quality it is neither as rich nor as sweet as Wm. Belt, but its flavor is mild and agreeable, and generally liked. The fruit ranks well for firmness, and we consider it a very valuable variety. At the Kentucky Experiment Station it bore two crops in 1910.

Goree. P.—Early. An accidental seedling discovered by Mr. Goree of Texas, and introduced by T. V. Munson & Son. It is a good grower and runner of the Warfield style, making many small plants. It is a great yielder, and the fruit is of good size, rich, glossy red, uniformly conical in shape and very firm. Its flavor is rich and sweet. It bears a second crop in Texas.

Gray's Dollar. P.—Medium. From Indiana, produced by A. G. Gray, who has originated several fine fruits. A good grower and plant-maker, resembling Brandywine in appearance and habits. It has long roots which enable it to withstand drouth and produce large crops. The berries are glossy red, fine flavored, and firm. They are said to be large, but with us last season they were only medium, and we must say that they had no more than a medium chance.

Haverland. I.—Early. This long-time favorite was originated in 1882 by B. H. Haverland of Hamilton Co., Ohio, and while scores of other varieties have come and gone it still maintains its popularity. For the last few years we have given it mere mention as too well known to need more, but this time we will quote from our catalog of 1889. It is interesting to see that it still holds good after more than two decades. "For large, healthy plants, vigorous growth and great productiveness this is not surpassed. The fruit is very large, long, conical, with a neck, never of bad form, bright red, ripens all over, moderately firm, and of fair quality."

Helen Gould. I.—Medium to late. Originated by J. R. Peck of Missouri about 1897, and brought out by our firm ten years later. It makes plants of good size and sends out a moderate number of runners. It needs high culture to make it do its best, and lack of nourishment causes the foliage to dwindle and be scant, exposing the fruit to the sun. This seems to be the only fault of the variety. It is a good yielder and the fruit is large and handsome, brilliant red with red flesh, glossy, and moderately firm. It is fine in flavor, though not as sweet as many others.

Highland. I.—Midseason. A chance seedling found by T. B. Carlisle of Mahoning County, Ohio. We introduced this berry two years ago with the co-operation of about twenty-five other dealers. It makes large plants and plenty of them. For several years it was the most productive variety in a large collection at the Ohio Experiment Station. The fruit is obtusely conical, fine glossy red, very juicy, and though rather tart its flavor is rich. It is moderately firm and one of the best for canning.

Island King. P.—Early. This is a Canadian berry, and was produced by Irvin Joyce from seed of the Lovett. It is a vigorous grower and makes many plants of rather small size. It has not had an opportunity to show what fruit it could produce on our place, but it is said to be of good size, shape, and color, and to have a peculiarly pleasing flavor.

July. I.—Very late. Grown by H. J. Schild of Michigan, and genuinely late. On our grounds in 1908 it began ripening sixteen days after Gill and Fairfield. The plant is of medium size, healthy, vigorous, and prolific. The berries, though not the

largest are above medium in size, and among the most attractive in our collection, conical in shape, and as uniform as though cast in moulds. The color is perfect, brilliant red and glossy, and the flesh is juicy and delicious. Too delicate for long shipment.

King Edward. P.—Midseason. Grown from seed of the Miller by D. J. Miller of Holmes Co., Ohio, who has originated several fine varieties of strawberries and some tree fruits which are superior in their line. We have fruited this berry several years, and it has been uniformly satisfactory, excepting last season, when it did not grow as well as usual. This may have been due to some local cause which we did not discover. It generally produces good-sized plants and is considered very prolific. The Ohio Station report describes the fruit as "Large, bluntly conical, very slightly necked, uniform; color bright, fresh crimson when fully matured, glossy and attractive. Flesh light in color, firm, fine grained, mild, sweet and good in flavor."

Kittie Rice, sometimes called Downing's Bride. I.—Midseason. We cannot better describe the Kittie Rice than by quoting from our catalog of two years ago. It is a superior berry for all purposes. The plant is a vigorous grower, healthy and productive. It makes just about the right number of runners, but they are slow in taking root. The natural constitution of the plant is such that it requires winter protection, and it is well worth the work. The fruit is large, conical, regular in form, dark red, glossy and very beautiful. The flesh is red, firm and of fine quality.

Latest. I.—Late. From S. H. Warren of eastern Massachusetts, who sent it out seven years ago. At that time the Ohio Experiment Station reported on it as "one of the most beautiful berries of the season," a verdict which has been confirmed year by year ever since. Its brilliant cherry color mottled in places with a lighter shade is peculiarly attractive, and its large size and fine, long-conical form add to its popularity. It is fairly firm, and its flavor is sweet and delicious. Its one fault of losing its gloss soon after being picked seems to be lost sight of among its numerous merits, and it ranks high among the many fine varieties now before the public. The plant is healthy, vigorous and prolific.

Lea. P.—Early. New. Produced by Thos. J. Custis of Accomac Co., Va., and sent to W. F. Allen of Md. for trial in 1908. The next year Mr. Allen awarded it a prize of one hundred dollars, and in 1910 he introduced it at three dollars a dozen. He describes it as making a strong, sturdy growth, and being very productive. The plants should be set farther apart than most varieties for best results. The berries are medium large, rather long, uniform in shape and firm in texture. There is nothing said of the flavor, but if not good it would hardly have won a prize.

Manhattan. P.—Late. New. Found among promiscuous seedlings in 1907 by J. E. Kuhns of N. J., who states that it is a very free plant-maker, and makes the largest plant in his collection. Very productive. Fruit very large and attractive, bright red and glossy, and firmer than most market varieties. Many of the "crown berries,"—the first to ripen on each stem,—weigh an ounce apiece, and occasionally one reaches two ounces. These berries are more or less corrugated, but rarely misshapen.

Margaret. P.—Medium. From the late John F. Beaver of Dayton, Ohio. Mr. Beaver was a banker, and also a lover of the strawberry, to which he devoted much of his spare time during the growing season. He delighted in raising new kinds from seed, and to his skill we owe three of our finest varieties, Kittie Rice, Margaret and Nick Ohmer. Mr. Beaver passed out of this life in December, 1910, but he left a fitting monument in his favorite fruit.

The plants of the Margaret are large, vigorous in growth, and perfectly healthy. They produce runners freely, and are very prolific. The fruit is very large, conical, sometimes oval, dark red with a brilliant gloss, firm, and of exquisite flavor. Some

growers pronounce it as good as Wm. Belt. It makes a remarkably long season. The late Hon. E. C. Davis of Massachusetts had a bed of this variety that yielded berries for thirty-eight consecutive days, and the last picking showed specimens nearly two inches in length. All of Mr. Beaver's productions need winter protection, and they are well worth it.

M. Crawford. P.—Midseason. Originated by J. R. Peck of Missouri, who also produced the Helen Gould. Ordinarily this makes fine, healthy plants which are very productive, but last season the foliage was somewhat deficient in places, and not ample enough to protect the fruit. The berries are large and firm, of fine flavor, rich red in color, conical in form, and all alike,—no irregularities and no green tips.

Meteor. P.—Medium to late. New: The originator, Mr. Charles Lunt of Massachusetts, describes this new berry in few words, as "Strong grower, dark, glossy berry, and productive." Mr. S. H. Warren who is acquainted with the Meteor, states that it has a profusion of long, bushy roots, and is able to carry a large crop of berries. In December last he wrote as follows: "Here in Mass. nearly all varieties of strawberries were a failure, owing to drouth the year before, frost in the spring, then a heavy rain and then a hot sun that baked thousands of quarts on the vines, but the Meteor under the same conditions produced a large crop of nice berries. I believe that when better known it will be one of the leading varieties. I think it is one of the most reliable berries on the list."

Mrs. Miller. I.—Medium to very late. From D. J. Miller of Holmes Co., Ohio. A fine berry which is steadily gaining in popularity. It makes large plants with ample foliage and strong fruit stalks. It is very productive. The fruit is very large, oblong in shape, and ranks high for firmness, and also for flavor, though not as sweet as Wm. Belt. It is slightly rough on the surface, but its brilliant red color makes it very attractive, and being red to the center and rich in flavor it is one of the best for canning.

Nick Ohmer. P.—This wonderful berry was produced by that wonderful grower, the late John F. Beaver. It was introduced by M. Crawford in 1898, and from his catalog of that date we reproduce a few sentences: "The plant is very large and stocky, sending out plenty of strong runners. The fruit is of the largest size, a giant among strawberries. Its only departure from the regular, roundish conical form is when under high culture it is somewhat triangular. It is dark, glossy red, firm, and of excellent flavor." The plants need winter protection.

Norwood. P.—Medium early. This berry was discovered by Mr. N. B. White of Mass., and is supposed to be a cross between Marshall and Corsican, both very large. The plant is a strong grower and makes a reasonable number of runners. The fruit is enormously large, and generally conical in form. The color is bright red from surface to center, and in quality it is equal to its parents which are both excellent. It holds its size well through a long bearing season, and is said to be a good shipper and keeper.

Ohio Boy. P.—Medium to late. New. This berry was originated by A. A. Eppert of Clermont Co., Ohio,—the native place of the Wm. Belt,—and introduced by him in 1910 at \$5.00 a dozen. It is a wonderful grower and multiplies very fast. Not having seen the fruit, we give Mr. Eppert's description: "The Ohio Boy is a great berry, made up of the qualities of the best berries in existence; fruit a rich dark red color, fine flavor, strong aroma, fine for canning, uniform in size, having very few cockscombs or flat berries. Time of ripening begins with the medium and lasts as late as the latest. A good shipper, standing up well in the crate, holding over in the patch without loss in case of delay in picking. As to the plant, I can say without fear of contradiction, that it is the strongest grower of the prolific or heavy bearing

kind." Mr. Eppert writes in a recent letter that the Ohio Boy has produced a leaf and stem that measured twenty-five inches in length to tip of leaf.

Orem. P.—Late. Introduced two years ago by J. H. Arndt of Maryland. A thrifty grower with fine foliage. It is later than Gandy and more productive. The berries are large and smooth, and hold their size well. They are light red in color, and fine in flavor.

Sample. I.—Late. Discovered by J. D. Gowing of eastern Mass., a locality which has produced many fine berries. It was introduced about a dozen years ago, and has been one of the leading late varieties ever since. The plants are strong with long roots, and exceedingly prolific. The fruit is large, roundish conical, bright red throughout, moderately firm, and fairly good, though not to compare with Wm. Belt for sweetness.

Sen. Dunlap. P.—Medium early and makes a long season. This grand berry was originated about seventeen years ago by Rev. J. R. Reasoner of Illinois, and introduced by our firm in 1900. It very soon became popular, and is probably planted more extensively than any other variety at present. It makes small plants but many of them, and they are wonderfully hardy. They should be planted about twice as far apart as most varieties to do their best. They have very long roots and a surprising capacity for enduring drouth and all kinds of hardship. They are immensely productive, and the fruit is of good size when the plants are not crowded, though never the largest. The berries are conical in form, the richest red in color, and near to the Wm. Belt in flavor. They are very firm, and retain their brightness after traveling long distances.

Twilley. P.—Medium early. Originated by Rev. W. J. Twilley of Accomac Co., Va., and sent to W. F. Allen in 1908 to compete with other new seedlings for a prize. The next year it won Mr. Allen's first prize of two hundred dollars for general excellence, and in 1910 Mr. Allen introduced it at five dollars a dozen. He states that it makes large plants with large crowns and vigorous foliage, and that the berry is large, firm, good, and a great keeper.

Uncle Jim. P.—Medium late. Also called Dornan. Produced by J. F. Dornan of Mich., and disseminated ten years ago by Flansburgh & Peirson. Our last year's catalog speaks of it as "One of that large class of grand berries which resemble each other so much that one description with slight variations would answer for all. They all make immense plants, and roots that are a wonder for length and abundance, and all yield great crops of great berries which hold their size well. The fruit is bright red and firm, with light red flesh." The quality is good, much above the average.

Warfield. I.—Medium early, ripening with Sen. Dunlap, and quite similar to that variety in plant, root, and fruit. It differs in being imperfect, and the Dunlap is its best fertilizer. It was discovered nearly thirty years ago by B. C. Warfield of southern Illinois, and was very popular for years after its introduction, but the Sen. Dunlap being perfect has superseded it to a considerable extent.

Wm. Belt. P.—Midseason. Originated in 1888 by the late Wm. Belt of Clermont Co., Ohio, and was introduced by M. Crawford in 1896. Its splendid plants, great productiveness, immense berries, beautiful color, and unsurpassed flavor place it high in public favor, and it also has the merit of being firm enough to bear shipping well. The typical form of the berry is conical, but the first one to ripen on each stem is cockscombed.

Wonder. P.—Medium late. Produced by S. A. Sampsel of Sandusky Co., Ohio. Like Uncle Jim, Corsican, and others of the same class, it is a favorite for its grand plants with their long roots, its productiveness, and its great red juicy berries. It is equal to Uncle Jim in flavor.

PRICE LIST OF STRAWBERRY PLANTS.

These prices are by express, not prepaid.

When plants are ordered by mail, add 5 cents for each dozen; 10 cents for each 25; 30 cents for each 100.

For Canadian orders the above rates must be doubled.

Six plants of one variety at dozen rates; 50 plants of one variety at hundred rates; 500 plants of one variety at thousand rates.

Customers sometimes want 100 plants made up of four 25's, or 1000 made up of four 250's, and do not know what prices to affix. For this reason we have placed the prices of 25's and 250's in our list.

When any space opposite any name in the list below is blank, it shows that we cannot furnish that variety in that number. Some we offer only by the dozen, others by 25's, and so on up to thousands.

Imperfect varieties (I) must have perfect varieties (P) near them.

Imperfect and pistillate mean the same; perfect, staminate and bisexual mean the same.

	12	25	100	250	1000		12	25	100	250	1000
Americus	P 2.50					July.....	I .20	.30	.75	1.35	4.00
Amanda	P 1.00					King Edward	P .20	.30	.75	1.35	5.00
Barrymore.....	P .40	.60	2.00			Kittie Rice.....	I .20	.30	.75	1.35	
Bubach	I .20	.30	.75	1.35	5.00	Latest.....	I .20	.30	.75	1.35	
Chesapeake.....	P .20	.30				Lea.....	P .50	.75	2.00		
Commonwealth....	P .20	.30	.75	1.35	5.00	Manhattan.....	P 1.00				
Early Ozark.....	P .40	.60				Margaret.....	P .20		.30	.75	1.35
Ekey.....	P .20	.30	.75	1.35	4.00	M. Crawford	P .20		.30	.75	1.35
Fendall	I .30	.45	1.00	1.75	7.50	Meteor.....	P .40	.60	1.50		
First Quality.....	P .20	.30	.75	1.35	5.00	Mrs. Miller.....	I .20	.30	.75		
Fremont Wins....	P .20	.30	.75			Nick Ohmer....	P .20	.30	.75		
Gill.....	P .20	.30	.75			Norwood.....	P .50	.75	2.00		
Glen Mary.....	P .20	.30	.75	1.35	4.00	Ohio Boy	P 1.00		1.50	4.00	
Golden Gate	P .20	.30	.75	1.35		Orem.....	P .20	.30	.75	1.35	4.00
Goree.....	P .30	.45	1.00	1.75		Sample.....	I .20	.30	.75	1.35	4.00
Gray's Dollar.....	P .20	.30	.75			Sen. Dunlap.....	P .20	.30	.75	1.35	4.00
Haverland.....	I .20	.30	.75	1.35	4.00	Twilley.....	P .50	.75			
Helen Gould	I .20	.30	.75	1.35	5.00	Uncle Jim.....	P .20	.30	.75	1.35	4.00
Highland.....	I .20	.30	.75	1.35	5.00	Warfield	I .20	.30	.75	1.35	
Iowa.....	P 2.50					Wm. Belt.....	P .20	.30	.75	1.35	4.00
Island King.....	P .30	.45	1.00	1.75		Wonder.....	P .20	.30	.75	1.35	4.00

CLASSES AS TO TIME OF RIPENING.

For convenience, we give alphabetical lists of the early, medium and late varieties.

Early.—Barrymore, Early Ozark, Fendall, Gill, Glen Mary, Golden Gate, Goree, Haverland, Island King, Lea, Norwood, Sen. Dunlap, Twilley, Warfield.

Medium.—Amanda, Bubach, Ekey, Gray's Dollar, Helen Gould, Highland, King Edward, Kittie Rice, Margaret, M. Crawford, Meteor, Mrs. Miller, Nick Ohmer, Ohio Boy, Wm. Belt.

Late.—Chesapeake, Commonwealth, First Quality, Fremont Williams, July, Latest, Manhattan, Orem, Sample, Uncle Jim, Wonder.

Everbearing.—Americus, Iowa.

RASPBERRIES

We offer one blackcap and one red raspberry, each excellent in its class.

Plum Farmer.—This berry was found about fifteen years ago by L. J. Farmer of New York, in a bunch of plants received from Ohio. It is the same variety that we sold last year, and is much valued by those who have grown it. Our own estimate of it is as high as ever. It is exceedingly vigorous and productive, quite early in ripening, and matures its crop in a short time. It is one of the largest of the blackcaps, very firm, and probably as good in flavor as any.

Herbert. From Canada.—This is without exception the most beautiful red raspberry we ever saw. It was originated in 1887 in the garden of R. B. Whyte, a prominent horticulturist of Ottawa, Ontario. It ripens early, five or six days ahead of Cuthbert. It is enormously productive and perfectly hardy, enduring 40° below zero without the slightest injury. We quote the description given by the originator, and subscribe to every word of it, for we have fruited the Herbert repeatedly.

"The cane is very strong and vigorous, slightly prickly, leaves large and healthy. It has never been affected by anthracnose, or disease of any kind. Fruit bright red, somewhat oblong, the largest of all red raspberries. Flavor very sweet and juicy, the very best for table use."

W. T. Macoun of the Experimental Farm at Ottawa, whose descriptions are always conservative, says of the Herbert:

"Herbert, a chance seedling originating with R. B. Whyte, Ottawa, Canada, in 1887. One of thirty seedlings, probably of Clarke. A very strong grower, hardy, and very productive. Fruit large to very large, obtusely conical, bright to rather deep red; drupes medium size, not crumbling; moderately firm; sweet and subacid, sprightly, juicy and of good flavor; quality very good. Season begins a few days before Cuthbert. The best red raspberry tested here."

We count it one of the great merits of the Herbert that it does not crumble. We believe that we are offering our customers the best and most profitable red raspberry ever grown.

BLACKBERRIES.

The blackberry should be planted in the fall or very early in the spring. It starts into growth at the first possible chance, and the young shoots are tender, and liable to be broken off in handling. It is a profitable fruit to raise, requiring but little expense in the growing, and bringing good prices almost everywhere.

We offer four varieties, all hardy, productive and good. For the home garden those that make the longest season are the more desirable. For market all are fine.

Blowers.—From western New York. We first became acquainted with this berry in 1903, and at once bought plants and began propagating it for sale. It is a vigorous grower, and will become a climber if permitted, but ordinarily it is cut back and made to stand alone. The first summer's growth trails along the ground, and we have had several inquiries about this, but when these shoots are cut back, as they should be in the fall or winter, they produce stiff, upright canes the next season. The Blowers is perfectly hardy in its native climate, and considered so the country over, though we have had one report of its having been winter-killed in northern Minnesota. It is very productive and makes a long season, about two months. The fruit is large and luscious, noted for its small seeds and juicy pulp.

Eldorado.—Discovered by E. M. Buechley of western Ohio twenty years ago, and its name is a synonym for reliability. It is a strong grower, and so perfectly hardy that it has never been injured by the extremest cold to which it has been exposed. It is immensely productive, and ripens its great crop in a few weeks, making

it a delight to pickers. The fruit is of good size, not extremely large but jet black, glossy, and beautiful, and its flavor is delicious. It has the quality of retaining its blackness and luster a long time after being picked, which makes it exceedingly valuable as a market berry.

Ward.—A native of New Jersey, found growing wild in a fence row, probably ten years ago or more. The canes make a sturdy growth, and have proved hardy wherever planted. Even the intense cold of New England does not affect them. As to the fruit, we subscribe to the description given by the Rural New Yorker six years ago: "The berries are large, jet black, and of best quality, with small, tender core." It adds, "They carry well, not changing color after picking, and always bring top prices." Its prophecy that the Ward would take its place among our best commercial blackberries has been fulfilled.

Watt.—Like the most of our fine popular blackberries this is a wild product of the fields. It was discovered growing in an orchard near Lawrence, Kansas, by D. G. Watt, who was so impressed by its productiveness and the size and quality of its fruit that he gave it his own name. It is a splendid grower, equal to any, and the wood is so firm and tough that the branches seldom if ever split down with their loads of fruit.. Its hardiness is well established, it having endured 30° below zero without injury. It begins to ripen in July, a few days after Eldorado, and continues through August and September, even yielding a few berries in early October, but not in marketable quantities. The fruit is large, lustrous black, and handsome. It is excellent in quality, and possesses a richness that makes it especially fine for canning.

CURRENTS.

Fifty years ago there were currant bushes in almost every garden, but they gradually disappeared after the worms came, and now, although currants can be made a sure crop by the use of hellebore, they are produced only by commercial growers, as a rule. There seems, however, of late years, to be a tendency towards reviving currant culture in gardens, and to those who want a few plants for this purpose we offer two very excellent varieties.

Comet.—We obtained this from the island of Jersey, and have had it in bearing nine years. It is a thrifty grower and holds its foliage late in the season, also its fruit. It yields heavy crops of large bunches, and the berries are as large as any grown. The color of the fruit is the typical currant red, and the flavor is excellent.

Perfection.—Originated by Chas. G. Hooker of Rochester, who crossed Fay's Prolific with White Grape hoping to obtain a currant as large as the one and as good and prolific as the other. The result was a perfect success, and was named Perfection. In growth and productiveness it is all that could be desired, and the fruit is very large and handsome. It is borne in long clusters and has a long stem between fruit and branch, an advantage in picking. It is fine for table use and makes beautiful jelly.

PRICE LIST OF RASPBERRIES, BLACKBERRIES AND CURRENTS.

These prices are by express, not prepaid.

If wanted by mail, add 10 cents a dozen for red raspberries and blackberries, and 15 cents a dozen for blackcaps and currants.

Our blackberry plants are all grown from root cuttings, and are much more valuable than sucker plants.

Our Watt root cuttings are from young plants, selected, and sure to grow.

Our currant plants will be cut back to about six inches of last year's wood, for convenience in packing.

	12	25	100	250	1000		12	25	100	250	1000
Plum Farmer .....	.30	.45	1.50			Watt .....	.50	.75	2.50	5.50	20.00
Herbert.....	.80	1.20	4.00			Watt root cuttings.	.30	.70	1.50	5.00	
Blowers.....	.40	.60	2.00			Comet.....	1.25	2.25	8.00		
Eldorado .....	.40	.60	2.00			Perfection	1.25	2.25	8.00		
Ward.....	.40	.60	2.00								

A FERTILIZER FOR THE STRAWBERRY.

It is absolutely necessary to have a fertilizer for the strawberry in order to make its cultivation profitable, and in many localities the commercial article is the only kind obtainable. This being the case, growers are interested in finding out what is the best kind, where it can be bought, and the price. Our Mr. M. Crawford has used commercial fertilizers for many years, has tried many brands, and made many experiments. As a result of his observations he recommends a Potato Phosphate manufactured in Zanesville, Ohio, and sold at thirty dollars a ton. It is honestly made, of good materials and produces wonderful results. It is packed in sacks weighing 100 pounds each; price \$1.50 per sack. The buyer pays the freight. Ask your agent the rate from Zanesville, Ohio. Send your order to us with the cash and the goods will be shipped promptly. The ammonia contained in this brand is in an available form, and not locked up in worthless materials, such as ground leather scraps, hair, and so on. We give below the guaranteed analysis:

Ammonia	- - - - -	2 to 3 per cent.
Available Phosphoric Acid	- - - - -	9 to 10 per cent.
Insoluble Phosphoric Acid	- : - - -	2 to 3 per cent.
Actual Potash K. 2 O.	- - - - -	6 to 7 per cent.

We have been selling this fertilizer through our catalog for five years, and so far as we have heard it has produced good results and given excellent satisfaction. During the first year we received many inquiries as to the best way of applying it, and since then we have given brief directions for its use, which we again repeat:

For strawberries one way is to put it in with a grain drill, after the ground is prepared for planting, about a week or ten days before the plants are to be set, thus giving it time to become somewhat blended with the soil. By this method the entire surface is enriched, and for growing fruit in wide matted rows it has the advantage of giving all the plants an equal chance.

Another way is to wait a short time after the plants are set, until they have started into growth, and then apply the fertilizer by hand, strewing a small quantity around each plant. Care must be taken not to let it touch the leaves, as it is liable to burn them. For this reason it should be put on when the air is still, and also because a wind, or even a gentle breeze, carries away the fine dust, and thus a portion of the richness is lost. When applied in this way the amount used may be divided, and part put on in the spring, say two-thirds, and the remainder in September, thus giving the runner plants a share. The amount required is exceedingly variable, according to the previous fertility of the soil, and the results aimed at. From 400 to 1000 pounds per acre may be used, and even more, if desired. We use from 600 to 800 pounds.

We are sometimes asked how to estimate the amount required for a small space from the number of pounds per acre. When strawberries are set as we set them, in rows three and one half feet apart, an acre contains 760 rods of a row. Allowing one pound of fertilizer to each rod of a row, an acre will require 760 pounds. Other estimates can be made from this, if more or less is to be used.

THE GLADIOLUS.

This flower is becoming more popular every year, and we are much pleased to offer so fine a list of varieties to our customers. Although not large, it is made up of choice kinds which include an extensive range of colors, and any one possessing this collection has a fine assortment at a moderate expense. We can ship by mail, express, or freight, according to the numbers ordered. All good sized, blooming bulbs.

On bulbs that are \$5.00 a hundred or more, we prepay the charges, by mail or express. For those that are less than \$5.00 add 5 cents a dozen and 50 cents a hundred to prices given. Thousands go by express not prepaid.

America.—A well known and very popular variety, a good grower and perfectly healthy. The color is a very delicate pink with the slightest shade of lavender, and splashed with crimson in the throat. Dozen 50c; 100 \$3.00.

Augusta.—White with a faint tinge of blue, and blue anthers. It may be called the standard white. Sure to bloom, and very hardy. Dozen 30c; 100 \$2.00.

Canary Bird.—Pure canary yellow. The name describes the color. Of great value. Dozen 75c; 100 \$5.00.

Early Amethyst.—This variety grows very tall, and the stem is slender and graceful. The color of the flower is a blending of violet and amethyst, with a yellow spearhead on the lower petal. Dozen 50c; 100 \$3.00.

Grace Henry.—Originated by M. Crawford. A fine grower, makes a long, straight spike scarcely ever branched, and very large dark red bulbs with plenty of bulblets. The flowers are large, and well arranged on the spike, which opens six or eight at once. The color is a dark, rich red with a satin luster, and a lighter shade through the center of each petal. The lower ones are beautifully mottled with red and white. 25c each; dozen \$2.50; 100 \$20.00.

Helen Sill.—This, also, was originated by M. Crawford, and is now offered for the first time. A good, healthy grower with a fine, long spike, and large, shapely flowers perfectly arranged. The color is a rich, lavender pink of rare beauty. Desirable for any purpose. 50c each; dozen \$5.00.

Klondike.—Tall and straight. Lemon color, with a maroon blotch in the throat. Dozen 50c; 100 \$3.00.

May.—Originated by M. Crawford, and one of the most popular commercial varieties in America and Europe. Color white, flaked with enough crimson to give it a pink shade at a distance. Dozen 50c; 100 \$2.50.

Mrs. Francis King.—A vigorous grower with a tall, straight spike. Flowers large, and of a pleasing shade of orange scarlet, but not quite close enough together. This is a favorite in the market. Dozen 50c; 100 \$2.50.

Mrs. Watt.—This makes a straight spike with large, well opened flowers of a deep, solid crimson, properly arranged. Much admired. 25c each; dozen \$2.50; 100 \$20.00.

Mrs. Will Thompson.—Thrifty plant, long spike, flowers close together, six or eight out at once, sometimes ten or twelve. The throat of the flower is yellow, shading to white at the opening. The upper petals and outer edges of the lower ones are bright pink penciled with white. 50c each; dozen \$5.00.

New America.—A strong grower, making a plant of the largest size and very large healthy bulbs with an average number of bulblets. The spike is very long, seldom branched, and never crooked. The flowers are large, and the color is a beautiful blending of pink and white. This was a great success in market last season. 30c each; dozen \$3.00; 100 \$20.00.

Principes.—Much admired in both Europe and America. The flower is immensely large, and the color a deep, shining scarlet with white marks on the lower petals.

The spike is of medium length, and opens two or three flowers at a time. 15c each; dozen \$1.50.

Rexford.—Grown by M. Crawford from seed of Merceria. Rose color with a white throat. Very beautiful. The two rows of flowers are slightly separated. This is its only defect. 15c each; dozen \$1.50; 100 \$10.00.

Shakespeare.—Early. White blotched with rose. Flower of beautiful shape. Dozen 75 cents; 100 \$5.00.

Taconic.—We described this last year as Gertrude, but have learned since that its right name is Taconic. It makes a tall, strong stem. The flowers are very showy, bright pink with blotches of brilliant cherry in the throat. Dozen 75c; 100 \$5.00.

White Lady.—One of the best whites. It has no suggestion of color except a tinge of cream in the throat. It has grown here two years in perfect health, but is said to have failed in a wet time in some localities. Dozen \$2.50; 25 cents each.

Wm. Mason.—Light red, of large size and fine appearance. Spike always straight, with flowers facing one way, and close enough to look rich and pleasing. 15 cents each; dozen \$1.50; 100 \$10.00.

Winifred.—This, like Rexford, is a seedling of Merceria, and was originated by M. Crawford. It makes a long, compact spike, tapering from base to tip, about twenty buds, six to ten open at once. Its color is pure scarlet with the large white-throat characteristic of Merceria, and white lines through the petals. A brilliant variety for massing. 30 cents each; dozen \$3.00; 100 \$20.00.

SOMETHING NEW.

For a few years past we have heard a good deal about Kunderd's ruffled gladioli. Now, for the first time, one of these is offered for sale. Through the kindness of the originator we have been permitted to bloom this variety twice, so we know its value.

Glory.—A new ruffled gladiolus, originated by A. E. Kunderd of Goshen, Ind. While this is the first of this type offered for sale, it will be followed by many others which are already in existence, but not in sufficient numbers. When we think of the Spencer sweet peas, the Masterpiece pansies and the ruffled trumpets of the daffodils, we have some idea of the value of this strain of gladioli. It has the endorsement of Luther Burbank, Dr. Van Fleet, and other eminent authorities. Mr. Kunderd describes Glory as follows: "Delicate cream pink, with a neat, attractive crimson stripe in the center of each lower petal. This shade of pink was previously unknown in gladioli. As a commercial color it is a winner, far outstripping the popular America." 25 cents each; dozen \$2.50; 100 \$18.00.

MIXED VARIETIES.

Our XX stock maintains its high standard of excellence, and we believe it to be the choicest mixture in the country. It has been built up through a long series of years by adding new, fine varieties and marking out those that were inclined to multiply too fast. In this way we have kept it in balance, and any one ordering a hundred bulbs may expect to receive a large number of beautiful varieties, and none that are inferior. Dozen 20 cents; 100 \$1.00; 1000 \$8.00.

Seedlings.—Fine quality, no two alike. Dozen 20 cents; 100 \$1.00; 1000 \$8.00.

THE DAFFODIL.

We have been growing daffodil bulbs with pleasure and profit for many years. Let us tell you about them if you are interested. You can sell the cut flowers in your nearest city and get well paid. Your stock will double annually, and your surplus bulbs are salable. Write for price list in September.